

FisZ-m2 consensus2 Map MPD (1 > 1423) Site and Sequence

Enzymes : 50 of 502 enzymes (Filtered)

Settings : Circular, Certain Sites Only, Standard Genetic Code

EcoR V

GATGGCGATATCCCGCATGAAAGCTGGCGGATGGCGGTGCTACGTGGCGCCGAGACCTCCAGTCCGCCCACTCA 75

CTACCGCTATAGGGCTACTTTGACACCGCGCTACCGGACAGATCCACGGGCGGTCTGGAGGGTCAAGGCGGTGAGT

Met Ala Ile Ser Arg Met Lys Ala Ala Met Ala Leu Leu Arg Ala Arg Gln Thr Ser Gln Ser Ala Thr Gln

Pst I

Pvu II

Taq I

ACACGTGCGCTTCTCTACTGAAGCCACTGATGCTCAGCTGCCGCTTACCGATGGGCTTTAAAGAGGCTCGAAA 150

TGTGGAGCGAAGATGACTTCGGTGACTACGAGCTGACGGCGCAATGGGTACCCGAAATTTTCCGAGCTTT

His Leu Ala Phe Ser Thr Glu Ala Thr Asp Ala Ala Ala Leu Arg Met Gly Phe Lys Lys Ala Arg Lys

AGACGAGGATGGCGGTGTGAAGTGGGCTGGAGGCGAGACCCGATTACACACAGATGTGAGCGCGTTTCGAC 225

TCTGCTCTACCGCCACACTTTCACCCGACCTCGCTCGGGCTAAGTGGTTGTCTACACTCGCGGCAAGCTG

Asp Glu Asp Gly Gly Val Lys Val Gly Leu Glu Ala Glu Pro Asp Ser Pro Thr Asp Val Ser Ala Val Ser Thr

Pro Val Val Glu Lys Lys Leu Val Pro Pro Ala Met Ser Ser Thr Gln Pro Leu Trp Leu Thr Gln His Pro

Sac I

GCCAGTAGTAGAAGAAGCTGTCGCCGACCATGATGATCCACACAGCCACTTTGCTCACACAGGACCATCC 300

CGGTCAATCATCTCTTTCGAGCACGCGGTCGGTACTCGAGGTGTGTCGGTGAACCGAGTGTGTCCTGTAGG

TGTGACAGACCTGTGGGCTTTGCACCGAAGATTGTGGTGTGGCGTCGGAGGAGCTGGAGGAAATCGGCTGAA 375

ACACTGTGTGACAGACCGCCGAAACGTTGCTTCAACACCAACCGGAGCGCTCTCGACCTCTTTACGGCAGTT

Val Thr Asp Leu Ser Gly Phe Ala Pro Lys Ile Val Val Val Gly Val Gly Ala Gly Gly Asn Ala Val Asn

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Sau3A I

CAACATGATCGCGCGGCGCTTCAGAGGTGTGGAGTTTCTGTTTGCACACGAGATGCTCAGCACTTACGCACGAC 450

GTGTGACTAGCGCGCGGACGTCCACACCTTCAAGCAAAACGTTGTGCTTACGAGTCTGTAATGCGTGTG

Asn Met Ile Ala Arg Gly Leu Gln Gly Val Glu Phe Leu Val Cys Asn Thr Asp Ala Gln His Leu Arg Thr Thr

Bsp I

Pst I

GCTGACGAGAACCCGCTTCAGATGGCTCTGGAATTGACTGGAGGACTGGGCTGTGGCGCTAACCCCGAAGTTGG 525

CGACTGCTCTTTGGCGCAAGTCTACCGAGGACTTAACTGACCTCTGACCGCACACCGCGATTGGGGCTTCAACC

Leu Thr Glu Asn Arg Val Gln Met Ala Pro Glu Leu Thr Gly Gly Leu Gly Cys Gly Ala Asn Pro Glu Val Gly

CCGAGAGGCGGAGAGCGCGGATGATGAGATTTTGGAGCGCTTCAGGTTGCAACATGATGTTTGTACTGTC 600

GGCTCTCGCGCTCTCGGCGCTAACTACTCTAAACCTCGGCAAGTCCACGTTTGTACTACAAACAATGACG

Arg Glu Ala Ala Glu Ala Ile Asp Glu Ile Leu Glu Arg Val Gln Gly Ala Asn Met Phe Val Thr Ala

GGGTATGGGTGGCGAAGAGGTACAGGTGCGAGCACCCGCTCATTTGCTCAGGCTGCTTAGATGCTGGTATCTCTAC 675

CCCATACCCACCGCTTGTCCATGTCACGTCGTGGGCGAGTACGAGTCCGACGGAATCTACGACCATAGGAGTG

Gly Met Gly Gly Thr Gly Thr Gly Ala Ala Pro Val Ile Ala Gln Ala Ala Leu Asp Ala Gly Ile Leu Thr

Hind III

Slu I

CGTAGCTGCTGTTACTAAGCGTTCCGGTTTGAGGGAACAACCGTGCAGGCTTGGCGGCAAGGCTTCGCTGA 750

GCATCGACAGCAATGATTCGCAAGGCCAAACTCCCTTTGTGGCAGCTTTCGAACGCGGTGTTCCGGAGCGACT

Val Ala Val Val Thr Lys Pro Phe Arg Phe Glu Gly Asn Asn Arg Ala Lys Leu Ala Ala Gln Gly Leu Ala Glu

Taq I

Sau3A I

Afl III

ACTGAGGATAGCGTCGATACGATGCTTGTGATCCCGAACCAAACTTGTTCACATGTCACAAATGAGCGCACCTC 825

TGACTTCTATCGCAGCTATGCTACCAACACTAGGGCTTGGTTTGAACAAAGTTGTACAGTTTACTCGCGTGGAG

Leu Lys Asp Ser Val Asp Thr Met Leu Val Ile Pro Asn Gln Asn Leu Phe Asn Met Ser Asn Glu Arg Thr Ser

FIG. 1

TTGCCAGTATCAAGCGTAAGCAGGGAAATGACACCTAATGACGTGATTGCTCAAGAAATCTCTACAATTGAA
AACCGGTCATAGTTTGGCATTCGTGCCCTTACTGTGGATTACTGCCTAACGACTTCTTTAGAGATGTTAACTT

Cla I
Taq I

SauA I

GTGGCATCGATGCTCCACGCACGCCGGTGCTGATCGGATTGGTATATACGGAGCTGCTTCATACTTAGTT
CACGTAAGTACAGAGG^{*}GGGTGGCGCGCAGCACTGCC^{*}TAAACCATAATATGCCTCAGCAAGTATGAATCAA
1423

Etq7-mt2 consensus2 Map MPD (1 > 1423) Site and Sequence

GTTCATGGACGCATTTCAGATGGCGGCAATGCTCTCGGACGGTCAAGACATTCGGATTTCGGTGTAT
CACTACCTGGCTAACTCTACCGCTTGTACAGGAAGACCTGCCAGTCTTGTAAAGCTAAACTACCACTA

[illegible]

GCCTGGGCTCATTACCTTGACTTTGGGATGTTCAATCGGTCATGCCAAATATGGGAAACGCTATGATGGGAG 975

Asn Met Gly Ser Val Met Gln Asn Met Gly Asn Ala Met Met Gly Ser

ISBN

TGGAGAGCCGATGGAGAGAACTGGGCTCTCGTGCTGCTGAAGATGCCATGGCGAACCCCTCTTCCTGGGTGATAT
 1050

Cys Cys His Asp Cys Cys Asp Arg Ala Leu Pro Ala Glu Asp Ala Leu Ala Asn Pro Leu Leu Gly Asp Ile

Sau3A I

TTGGATTAGGACGCCAAGGCATGATCGTTAATATCAGGAGGCTCCGACCTACGCTATTGAGTTCATGA
AAGCTAAATCCCTCCGCTCCGCTACTATCAATATTAGTCCCTCCGAGGCTGGACTGCGATAAATCTCAACTACT

Cys Val Leu Asp Ala Leu Cys Met Ile Val Asp Ile Thr Gly Ser Asp Leu Thr Leu Phe Glu Val Asp Glu

Call 3A!

GGCTGCTGAGCGTGTACGCGGGAACTTGCATCCACAGCCCAATCATCTTCGGTTTCGACCTTCGAGACTC 1200

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GCCTGGGGGGAAGCTACCGGCTCCGTGGTTGCCACTGGTATTGCCGACCCCGACAAGTATAGAGCCGTGATG 1275

Leu Gly Gly Val Leu Arg Val Ser Val Val Ala Thr Gly Ile Ala Asp Pro Asp Lys Leu •

	Source Organism (organelle)	GenBank Accession No.
SEQ ID NO: 11	<i>Agrobacterium tumefaciens</i>	O30992
SEQ ID NO: 12	<i>Sinorhizobium meliloti</i>	P30327
SEQ ID NO: 13	<i>Bartonella clarridgeiae</i>	AAD31718
SEQ ID NO: 14	<i>Rickettsia prowazekii</i>	Q9ZCQ3
SEQ ID NO: 15	<i>Caulobacter crescentus</i>	P52976
SEQ ID NO: 16	<i>Cyanidioschyzon merolae</i> (mt)	BAA85115
SEQ ID NO: 4	<i>Phytophthora infestans</i> -mt2	this invention
SEQ ID NO: 17	<i>Mallomonas splendens</i> (mt)	AAF35432
SEQ ID NO: 2	<i>Phytophthora infestans</i> -mt1	this invention
SEQ ID NO: 18	<i>Gentiana lutea</i> (cp)	T51088
SEQ ID NO: 19	<i>Nicotiana tabacum</i> (cp, 2-1)	T51087
SEQ ID NO: 20	<i>Arabidopsis thaliana</i> (cp,2-1)	T49028
SEQ ID NO: 21	<i>Physcomitrella patens</i> (cp, 1)	T51089
SEQ ID NO: 22	<i>Physcomitrella patens</i> (cp, 2)	T51090
SEQ ID NO: 23	<i>Guillardia theta</i> (cp)	CAB40398
SEQ ID NO: 24	<i>Mallomonas splendens</i> (cp)	AAF35433
SEQ ID NO: 25	<i>Anabaena</i> PCC7120	CAA83241
SEQ ID NO: 26	<i>Synechocystis</i> PCC6803	P73456
SEQ ID NO: 27	<i>Arabidopsis thaliana</i> (cp,1-1)	Q42545
SEQ ID NO: 28	<i>Pisum sativum</i> (cp)	T06774
SEQ ID NO: 29	<i>Nicotiana tabacum</i> (cp,1-3)	CAB89287
SEQ ID NO: 30	<i>Nicotiana tabacum</i> (cp,1)	CAB41987
SEQ ID NO: 31	<i>Nicotiana tabacum</i> (cp,1-1)	CAB89286
SEQ ID NO: 32	<i>Nicotiana tabacum</i> (cp,2)	AAF23770

<u>Bacterial FtsZ</u>	1	50
SEQ ID NO: 11	PRITVFGVGGGGGNAVNMMITVGLQGVDFFVANTDAQALMT..KADRVQLGVNVTETGL	
SEQ ID NO: 12	PRITVFGVGGGGGNAVNMMITAGLQGVDFVANTDAQALMT..KAERIIQMGVAVTEGL	
SEQ ID NO: 13	PRITVFGVGGGGGNAVNMMINAGLQGVDFVANTDAQALAMS..KAERVQLGAAVTEGL	
SEQ ID NO: 14	PTITVFGVGGAGSNAVNMMIHANLQGANFVANTDAQSLEHS..LCINKIQLGVSTTRGL	
SEQ ID NO: 15	PRIVVFGVGGAGGNAVNMMIEAGLEGVEFVANTDAQQLQFA..KTDRIQLGVQITQGL	
<u>Mitochondrial FtsZ</u>		
SEQ ID NO: 16	PRIMVVGVGAGGNAVNMMIASSLPGEFLVANTDAQALKMS..LCPNRIQLGASLTEGL	
SEQ ID NO: 4	PKIVVVGVGAGGNAVNMMIARGLQGVFLVCNTDAQHLRTT..LTENRVQMAPELTGGL	
SEQ ID NO: 17	PKICVFGVGGGGCNAVNMMIARKLSGVEFVCANTDAQHLSTC..LTENKLQLGKESTQGL	
SEQ ID NO: 2	AS.....QLEGVEFIVANTDCQALGRS..LAPHKITLGKDITKGL	
<u>Chloroplast FtsZ</u>		
SEQ ID NO: 18	AKIKVVGVGGGGSNAVNRMIESAMKGVEFWIVNTDVQAIKMSPVYLENRLQIGQELTRGL	
SEQ ID NO: 19	AKIKVVGVGGGGSNAVNRMIESSMKGVEFWIVNTDIQAMRMSPVAAEQRLPIGQELTRGL	
SEQ ID NO: 20	ARIKVIQVGGGGSNAVNRMIESEMSGVEFWIVNTDIQAMRMSPVLPDNRLQIGKELTRGL	
SEQ ID NO: 21	AKIKVIQVGGGGSNAVNRMLESEMKGVEFWIVNTDAQAMALSPVPAQNRLQIGQKLTRGL	
SEQ ID NO: 22	AKIKVIQVGGGGSNAVNRMLESEMKGVEFWIVNTDAQAMALSPVPAQNRLQIGQKLTRGL	
SEQ ID NO: 23	CVIKVIQVGGGGSNAVNRMVG.GVEGVEFWINTDAQALSRS..LAPNTCNICAKLTRGL	
SEQ ID NO: 24GVELWVVNTDAQALSRS..SAKRRNLNIGKVLTRGL	
SEQ ID NO: 25	ANIKVIQVGGGGSNAVNRMIESDVGVEFWINTDAQALTLA..GAPSRLQIGQKLTRGL	
SEQ ID NO: 26	AKIKVIQVGGGGSNAVNRMIASGVTGIDFWAINTDSQALTNT..NAPDCIQIGQKLTRGL	
SEQ ID NO: 27	ARIKVIQVGGGGSNAVNRMISGLQSVDFYAINNTDSQALLQFSA..ENPLQIGELLTRGL	
SEQ ID NO: 28	AKIKVVGIGGGGSNAVNRMIGSGLQGVDFYAINNTAQALLHSAA..ENPIKIGELLTRGL	
SEQ ID NO: 29	AKIKVIQVGGGGSNAVNRMIGSGLQGVDFYAINNTAQALLQSAA..ENPLQIGELLTRGL	
SEQ ID NO: 30	AKIKVIQVGGGGSNAVNRMIGSGLQGVDFYAINNTAQALLQSAA..ENPLQIGELLTRGL	
SEQ ID NO: 31	AKIKVVGVGGGGSNAVNRMIGSGLQGVDFYAVNTAQALLQSTV..ENPIQIGELLTRGL	
SEQ ID NO: 32	AKIKVVGVGGGGSNAVNRMIGSGLQGVDFYAVNTAQALLQSTV..ENPIQIGELLTRGL	

FIG. 2

<u>Bacterial FtsZ</u>		60	110
SEQ ID NO: 11	GAGSQPEVGRAAAEECIDEI	IDHLNGTHMCFVTAGMGGGTGTGAAPVVAQAARNKGILTV	
SEQ ID NO: 12	GAGSQPEVGRAAAEECIDEI	IDHLQGTHMCFVTAGMGGGTGTGAAPIVAQAARNKGILTV	
SEQ ID NO: 13	GAGALPEVGRAAADECIDEI	IDHLADSHMVFITAGMGGGTGTGAAPVVANAAREKGILTV	
SEQ ID NO: 14	GAGASPEVGALAAQESENE	IRSSLENSNMVFITAGMGGGTGTGSAPIIARIAKELGILTV	
SEQ ID NO: 15	GAGAHPEVGMSAAEESFPE	IGEHLGHAHMFITAGMGGGTGTGAAPIIAKCARERGILTV	
<u>Mitochondrial FtsZ</u>			
SEQ ID NO: 16	GAGARPDIGRAAAEEAYET	LKREFRGVHLLFVTAGMGGGTGTGAAPIIARAAAEELGCLTV	
SEQ ID NO: 4	GCGANPEVGREAAEAIDEI	LERVQGANMMFVTAGMGGGTGTGAAPVIAQAALDAGILTV	
SEQ ID NO: 17	GCGANPESGRRAAEESKEE	IARYIADANMVFITAGMGGGTGTGAAPVVAEVCMEKDILTV	
SEQ ID NO: 2	GAGSKPELGKRSAEQQKVD	IQRMLQDSNMLFITGGMGGGTCTGAAPVVASVARELGILTV	
<u>Chloroplast FtsZ</u>			
SEQ ID NO: 18	GAGGNPDIGMNAAKESKEA	IEEAVYGADMVFTAGMGGGTGTGGAPVIAGIAKSMGILTV	
SEQ ID NO: 19	GAGGNPDIGMNAANESKQA	IEEAVYGADMVFTAGMGGGTGTGAAPIIAGTAKSMGILTV	
SEQ ID NO: 20	GAGGNPEIGMNAARESKEV	IEEALYGS DMVFTAGMGGGTGTGAAPVIAGIAKAMGILTV	
SEQ ID NO: 21	GAGGNPEIGCSAAEESKAM	VEEALRGADMVFTAGMGGGTGSGAAPIIAGVAKQLGILTV	
SEQ ID NO: 22	GAGGNPEIGCSAAEESKAM	VEEALRGADMVFTAGMGGGTGSGAAPIIAGVAKQLGILTV	
SEQ ID NO: 23	GAGGNPEIGRKAAEESRD	LIAEAVSAGDLVFVTAGMGGGTGSGAAPVIAEVAKEMGCLTV	
SEQ ID NO: 24	GAGGNPAIGAKAAEESREE	IMAVVKNADLVFTAGMGGGTGSGAAPVVAECAKEAGALT	
SEQ ID NO: 25	GAGGNPAIGQKAAEESRDE	IATALEGADLVFITAGMGGGTGTGAAPVIAEVAKEMGALT	
SEQ ID NO: 26	GAGGNPAIGQKAAEESRDE	IARSLEGLDLVFITAGMGGGTGTGAAPVIAEVAKEMGCLTV	
SEQ ID NO: 27	GTGGNPLLGEQAAEESKDA	IANALKGSDLVFITAGMGGGTGSGAAPVVAQISKDAGYLT	
SEQ ID NO: 28	GTGGNPLLGEQAAEESKEA	IANALKGSDLVFITAGMGGGTGSGAAPVVAQISKEAGYLT	
SEQ ID NO: 29	GTGGNPLLGEQAAEESKEA	IANSLKGSDMVFITAGMGGGTGSGAAPVVAQIAKEAGYLT	
SEQ ID NO: 30	GTGGNPLLGEQAAEESKEA	IANSLKGSDMVFITAGMGGGTGSGAAPVVAQIAKEAGYLT	
SEQ ID NO: 31	GTGGNPLLGEQAAEESKEH	IANALKGSDMVFITAGMGGGTGSGAAPVVAQIAKEAGYLT	
SEQ ID NO: 32	GTGGNPLLGEQAAEESKEH	IANALKGSDMVFITAGMGGGTGSGAAPVVAQIAKEAGYLT	
<u>Bacterial FtsZ</u>		120	170
SEQ ID NO: 11	GVVTKPFHFEGGRRMRLAE	QEGIEELQKSVDTLIVIPNQNLFR	IANDKTTFADAFAMADQV
SEQ ID NO: 12	GVVTKPFHFEGGRRMRIAD	QGISDLQKSVDTLIVIPNQNLFR	IANDKTTFADAFAMADQV
SEQ ID NO: 13	GVVTKPFQFEGARRMKTAE	AGIEELQKSVDTLIVIPNQNLFR	IANEKTTFSDAFAMADQV
SEQ ID NO: 14	GVVTKPFHFEGGHRMKTAD	KGLIELQQFVDTLIVIPNQNLFR	IANEQTTFADAFKMADDV
SEQ ID NO: 15	GVVTKPFHFEGRHRMRLAD	SGIQELQRYVDTLIVIPNQNLFR	VANERTTFAEAFGMADQV
<u>Mitochondrial FtsZ</u>			
SEQ ID NO: 16	AVVTKPFHFEGMIRMKTAE	QGIVELTEHVDTMLVIPNQNLFK	VASPRTSFLDAFRLADHV
SEQ ID NO: 4	AVVTKPFRFEGNNRAKLAA	QGLAELKDSVDTMLVIPNQNLFN	MSNERTSLMDAFRMADNV
SEQ ID NO: 17	AVVTKPFSFEGKRRARLAN	EGIRSLEDVDTLIIIPNQNI	FKLINASTSMADAFGLADDI
SEQ ID NO: 2	GVVSTPFRSEGNRTRLAN	AGVKELAKYVDTLIVVPNQNL	LALADKSTTMLEAFRYADDV
<u>Chloroplast FtsZ</u>			
SEQ ID NO: 18	GIVTTPFSFEGRRRAVQAQ	EGIAALRDNDTLIVIPNDKLLT	AVSPSTPVTEAFNLADDI
SEQ ID NO: 19	GIVTTPFSFEGRRRAVQAQ	EGIAALRENDTLIVIPNDKLLT	AVSPSTPVTEAFNLADDI
SEQ ID NO: 20	GIATTPFSFEGRRRTVQAQ	EGLASLRDNDTLIVIPNDKLLT	AVSQSTPVTEAFNLADDI
SEQ ID NO: 21	GIVTTPFAFEGRRRAVQAQ	HEGIAALKNNVDTLITIPNNKLLT	AVAQSTPVTEAFNLADDI
SEQ ID NO: 22	GIVTTPFAFEGRRRSVQAQ	HEGIAALKNNVDTLITIPNNKLLT	AVAQSTPVTEAFNLADDI
SEQ ID NO: 23	GVVTKPFAFEGKRRMQQAN	DAIINLRNKVDTLIVVSN	DKLLQIVPDNTPLQDAFSVADDI
SEQ ID NO: 24	GVVTKPFGFEGRKRMQQAR	NAILEMKDKVDTLIVVSN	DKLLKIVPDNTPLTEAFLVADDI
SEQ ID NO: 25	GVVTRPFFVFEGRRRTSQA	EQGIEGLKSRVDTLIIIPNNKLL	LEVIPEQTPVQEA
SEQ ID NO: 26	GIVTRPFTFEGRRRAKQAE	EGINALQSRVDTLIVIPNNQL	LSVIPAETPLQEA
SEQ ID NO: 27	GVVTPFSFEGKRRLQALEA	IEKLQKNVDTLIVIPNDRLLD	IADEQTPLODAFLLADDV
SEQ ID NO: 28	GVVTPFSFEGKRRLQALEA	IEKLQKNVDTLIVIPNDRLLD	IADEQMPLODAFRLADDV
SEQ ID NO: 29	GVVTPFSFEGKRRLQALEA	IEKLQKNVDTLIVIPNDRLLD	IADEQTPLODAFLLADDV
SEQ ID NO: 30	GVVTPFSFEGKRRLQALEA	IEKLQKNVDTLIVIPNDRLLD	IADEQTPLODAFLLADDV
SEQ ID NO: 31	GVVTPFSFEGKRRLQALEA	IEKLQKNVDTLIVIPNDRLLD	IADEQTPLODAFLLADDV
SEQ ID NO: 32	GVVTPFSFEGKRRLQALEA	IEKLQKNVDTLIVIPNDRLLD	IADEQTPLODAFLLADDV

FIG. 2

<u>Bacterial FtsZ</u>		180	230
SEQ ID NO: 11	LYSGVACITDLMVKEGLINLDFADVRSVMREMARPMGMTGE...	ASGPARAMQAAEAAI	
SEQ ID NO: 12	LYSGVACITDLMVKEGLINLDFADVRSVMREMGGRAMMTGE...	ASGEGRAMAAAEAAI	
SEQ ID NO: 13	LYSGVASITDLMIKEGLINLDFADVRSVMHEMGGRAMMTGE...	ASGDGRALAAAEAAI	
SEQ ID NO: 14	LHAGVRGVTDLMIMPGLINLDFADIKAVMSEMKGAMMTGE...	DSGEDRAIKAAESAI	
SEQ ID NO: 15	LHSGVRSITDLMVLPGLINLDFADVRTVMTEMGKAMMTGE...	GTAEDRALMAAQNAI	
<u>Mitochondrial FtsZ</u>			
SEQ ID NO: 16	LYSGVRSITDLMTPVGLINLDFADVRSVVREMGGRAMMGSSEVEMEAGNEERAIRASEAAI		
SEQ ID NO: 4	LLDGVKNISDLMVMPLINLDFADVQSVQMGNAMMGSGEAD...	GENRALRAAEDAL	
SEQ ID NO: 17	LLAGVKSITDLMVRPGLINLDFADVRTVMSGMGHAIMGTGQAE...	GEDRAIRAANDAL	
SEQ ID NO: 2	LLEGVKGVTDLIVRPGLINL.....		
<u>Chloroplast FtsZ</u>			
SEQ ID NO: 18	LRQGVRGISDIITIPGLVNVDFAVRAIMANAGSSLMGIGT...	ATGKTRARDAALNAI	
SEQ ID NO: 19	LRQGVRGISDIITIPGLVNVDFAVRAIMANAGSSLMGIGT...	ATGKTRARDAALNAI	
SEQ ID NO: 20	LRQGVRGISDIITIPGLVNVDFAVRAIMANAGSSLMGIGT...	ATGKSRARDAALNAI	
SEQ ID NO: 21	LRQGVRGISDIITVPGLVNVDFAVRAIMANAGSSLMGIGT...	ATGKSRAREAAISAI	
SEQ ID NO: 22	LRQGVRGISDIITVPGLVNVDFAVRAIMANAGSSLMGIGT...	ATGKSKAREAAISAI	
SEQ ID NO: 23	LRQGVVGISEIIVRPGLINVDFAVRSVMADAGSALMGIGT...	GSGKTRAQDAAVAAI	
SEQ ID NO: 24	LRQGVVGITEIIVKPLVNVDFAVVRTIMGNAGTALMGIGH...	GKGKNRAKDAALSAI	
SEQ ID NO: 25	LRQGVQGISDIITIPGLVNVDFAVRAVMADAGSALMGIGV...	SSGKSRAREAAIAAI	
SEQ ID NO: 26	LRQGVQGISDIITIPGLVNVDFAVRAVMADAGSALMGIGV...	GSGKSRAREAAIAAI	
SEQ ID NO: 27	LRQGVQGISDIITIPGLVNVDFAVRAVMADAGSALMGIGV...	SSSKNRAEEAAEQAT	
SEQ ID NO: 28	LRQGVQGISDIITIPGLVNVDFAVRAVMADAGSALMGIGV...	SSSKNRAEEAAEQAT	
SEQ ID NO: 29	LRQGVQGISDIITIPGLVNVDFAVRAVMADAGSALMGIGV...	SSSKNRAEEAAEQAT	
SEQ ID NO: 30	LRQGVQGISDIITIPGLVNVDFAVRAVMADAGSALMGIGV...	SSSKNRAEEAAEQAT	
SEQ ID NO: 31	LCQGVQGISDIITIPGLVNVDFAVRAVMADAGSALMGIGV...	SSSRNRAEEAAEQAT	
SEQ ID NO: 32	LCQGVQGISDIITIPGLVNVDFAVRAVMADAGSALMGIGV...	SSSRNRAEEAAEQAT	
<u>Bacterial FtsZ</u>		240	290
SEQ ID NO: 11	ANPLLD.ETSMKGAQGLLISITGGRDLTLFEVDEAAATRIREEVDP.	DANII LGATFDEAL	
SEQ ID NO: 12	ANPLLD.ETSMKGAQGLLISITGGRDLTLFEVDEAAATRIREEVDP.	DANII LGATFDEEL	
SEQ ID NO: 13	ANPLLD.DTSMRGARGLLISITGGRDMLTFEVDEAAANRIREEVDA.	DANVIFGAIIDDES	
SEQ ID NO: 14	SNPLLD.HSSMCGARGVLINITGGPDMTLFEVDNAANRIREEVDNIDANI	IFGSTFNPEL	
SEQ ID NO: 15	ANPLLD.EVSLKGAKAVLVNVTGGMMDTLFEVDEAANAISDQVDP.	EANII FGAAFDPSL	
<u>Mitochondrial FtsZ</u>			
SEQ ID NO: 16	CNPLLD.ETSLRGARGVLVNITGGTDMTLFEIDAAANRIREQVDP.	DANII FGSAFDASM	
SEQ ID NO: 4	ANPLLG.DISIKDAKMIVNITGGSDDLTLFEVDEAAERVTRELDHPHANI	IFGSTFDDSL	
SEQ ID NO: 17	NNPLLGDFSVRSAKGMVLNITGGKDLTLFEVDAAAQRITSEIEDEDANV	IFGSSFDES	
SEQ ID NO: 2		
<u>Chloroplast FtsZ</u>			
SEQ ID NO: 18	QSPLLD..IGIERATGIVWNITGGSDDLTLFEVNAAAEEVIYDLVDP.	SANLIFGAVVDPSL	
SEQ ID NO: 19	QSPLLD..IGIERATGIVWNITGGSDDLTLFEVNAAAEEVIYDLVDP.	SANLIFGAVIDPSI	
SEQ ID NO: 20	QSPLLD..IGIERATGIVWNITGGSDDLTLFEVNAAAEEVIYDLVDP.	TANLIFGAVVDPAL	
SEQ ID NO: 21	QSPLLD..VGIERATGIVWNITGGSDDLTLFEVNAAAEEVIYDLVDP.	NANLIFGAVVDEAL	
SEQ ID NO: 22	QSPLLD..VGIERATGIVWNITGGSDDLTLFEVNAAAEEVIYDLVDP.	NANLIFGAVVDEAL	
SEQ ID NO: 23	SSPLLD..FPIEKARGIVFNITGGQDMLTHEINSAAEEVIYEAVDS.	NANII FGALVDDNM	
SEQ ID NO: 24	SSPLLD..FPITRAKGIVFNIVGGSMSLQEIINAAAEEVIYENVVQ.	DANII FGAMVDDKM	
SEQ ID NO: 25	SSPLLE..CSIEGARGVFNITGGSDDLTLHEVNAAAETIYEVVDP.	NANII FGAVIDDR	
SEQ ID NO: 26	SSPLLE..SSIQGAQGVFNITGGTDLTLHEVNAAAETIYEVVDA.	DANII FGAVIDDR	
SEQ ID NO: 27	LAPLIG..SSIQSATGVVYNITGGKDITLQEVNRVSQVVTSLADP.	SANII FGAVVDDRY	
SEQ ID NO: 28	LAPLIG..SSIQSATGVVYNITGGKDITLQEVNRVSQVVTSLADP.	SANII FGAVVDDRY	
SEQ ID NO: 29	LAPLIG..SSIQSATGVVYNITGGKDITLQEVNRVSQVVTSLADP.	SANII FGAVVDERY	
SEQ ID NO: 30	LAPLIG..SSIQSATGVVYNITGGKDITLQEVNRVSQVVTSLADP.	SANII FGAVVDERY	
SEQ ID NO: 31	LAPLIG..LSIQSATGVVYNITGGKDITLQEVNKSQVVTSLADP.	SANII FGAVVDERY	
SEQ ID NO: 32	LAPLIG..SSIQSATGDVYNITGGKDITLQEVNKSQVVTSLADP.	SANII FGAVVDERY	

FIG. 2

<u>Bacterial FtsZ</u>	300
SEQ ID NO: 11	E.GLIRVSVVATGI
SEQ ID NO: 12	E.GLIRVSVVATGI
SEQ ID NO: 13	E.GVIRVSVVATGI
SEQ ID NO: 14	K.GIIRVSVVATGI
SEQ ID NO: 15	E.GVIRVSVVATGM
<u>Mitochondrial FtsZ</u>	
SEQ ID NO: 16	Q.GRLRVSVLATGI
SEQ ID NO: 4	G.GKLRVSVVATGI
SEQ ID NO: 17	Q.GSIRVSIVATGI
SEQ ID NO: 2
<u>Chloroplast FtsZ</u>	
SEQ ID NO: 18	C.GQVSITLIATGF
SEQ ID NO: 19	S.GQVSITLIATGF
SEQ ID NO: 20	S.GQVSITLIATGF
SEQ ID NO: 21	H.GQVSITLIATGF
SEQ ID NO: 22	H.DQISITLIATGF
SEQ ID NO: 23	EN.EISITVVATGF
SEQ ID NO: 24	TSGEVSITVLATGF
SEQ ID NO: 25	Q.GEVKITVIATGF
SEQ ID NO: 26	Q.GEMKITVIATGF
SEQ ID NO: 27	.TGEIHVTIIATGF
SEQ ID NO: 28	.TGEIHVTIIATGF
SEQ ID NO: 29	.NGEIHVTIIATGF
SEQ ID NO: 30	.NGEIHVTIIATGF
SEQ ID NO: 31	.NGEIQVTIIATGF
SEQ ID NO: 32	.NGEIQVTIIATGF

FIG. 2

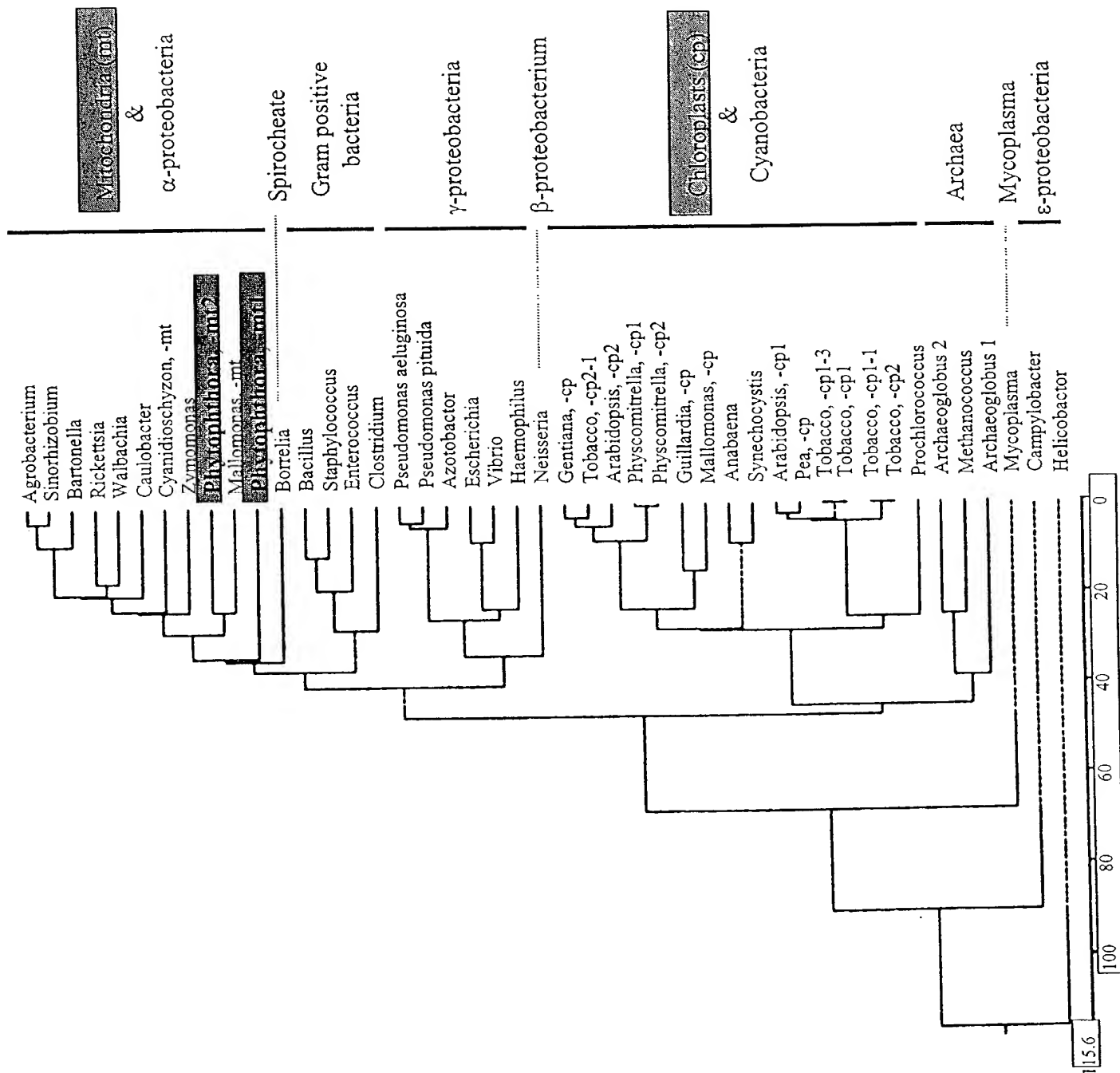


FIG. 3

115.6 100 80 60 40 20 0